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ABSTRACT

A national study (the seventeenth annual study of its kind) examined the supply and demand for teachers of vocational agriculture in 1981. To obtain data pertaining to supply and demand for vocational agriculture teachers, researchers mailed questionnaires and follow-up letters and made telephone calls to all institutions preparing teachers in vocational agriculture as well as to the offices of state supervisors in agriculture. Information regarding numbers of graduates qualified to teach agriculture and the number of teaching positions available were then tabulated for each state and each institution preparing teachers. Data revealed that while the secondary vocational agriculture supply and demand situation has stabilized in recent years, a shortage of vocational agriculture teachers continues to exist. While fewer secondary teachers are teaching production agriculture and more are teaching ornamental horticulture, the number of postsecondary teachers is balanced among production agriculture, ornamental horticulture, and other specialty areas. Most secondary positions were filled by fully certified teachers. Recommendations called for increased efforts to recruit students into vocational agriculture education, to reduce teacher turnover, and to broaden certification standards. (MN)

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VT RESEARCH SERIES

A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF VOCATIONAL AGRICULTURE IN 1981

By
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College of Education
The University of Tennessee
February 1982

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FOREWORD

Demand and supply data about vocational agriculture teachers on a state and national basis can be useful in recruitment and public relations efforts. This is the major premise for the study which has been conducted annually for seventeen consecutive years. This study provides objective data from every state that can be used by agricultural education leaders to identify and compare teacher trends in the vocational agriculture profession. Also, it can provide information for planning and evaluating programs. A fifteen-year summary study was published nationally in the 1980 Agriculture Teachers Directory.

In terms of actual use, this study has done much to stimulate recruitment efforts nationally and in states where teacher shortages occur. Teacher education institutions and state departments of education have used the data to aid in their planning and expansion of agricultural education programs. In addition, the data have been used to assist in modifying certification standards. Information from the study has also been used by the National Vocational Agricultural Teachers Association in a careers booth at the National FFA Convention. This report is distributed to every state education department and agricultural teacher education institution, and to selected agricultural education leaders in the United States. Summary reports appear periodically in The Agricultural Education Magazine and the Agriculture Teachers Directory. Agricultural business and industry newsletters and magazines, including The National Future Farmer, use some of the data in news columns and articles. Each year the author receives many favorable comments about the study and requests for information. A condensation of this report is attached for public relations purposes. This fact sheet is being widely circulated to agricultural educators and others throughout the United States.

Verbal and monetary support for this study and its distribution was provided by the Professional Personnel Recruitment Committee of the Agricultural Education Division, American Vocational Association. During the annual American Vocational Association meeting in December, the Committee receives a progress report of the current study, reviews last year's report, and makes recommendations for improving further study efforts. A request has been made for financial support to the Ag-Ed Division for the 1982 study. Responsible suggestions are welcome from any reader.

The author wishes to thank the Department of Vocational-Technical Education for its assistance with the study this year. A special acknowledgment is made to Mrs. Elizabeth Lane, secretary to the agricultural education staff at The University of Tennessee, Knoxville. She has aided in the conduct of this study for eight years.

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SUPPLY AND DEMAND FOR TEACHERS OF VOCATIONAL AGRICULTURE IN THE UNITED STATES 1981

INTRODUCTION

The much publicized oversupply of teachers in education during the 1970's is changing to a teacher shortage in the 1980's. The field of vocational agriculture education has had a shortage of teachers for many years. This report proposes to describe the nature and degree of the supply and demand of vocational agriculture teachers in 1981. For the first time in this annual study, emphasis will be placed upon the curriculum and clientele of post-secondary vocational agriculture teachers.

In addition, secondary vocational agriculture teacher changes and trends will be identified which have occurred since 1965 when the study began. The findings of this seventeenth annual survey of the supply and demand for teachers of vocational agriculture will be used to stimulate and aid state and nationwide recruitment efforts to secure prospective teachers for the profession.

GATHERING THE DATA

The data on teacher supply and demand were secured from all known institutions preparing teachers in vocational agriculture as well as the offices of head state supervisors in agriculture. Questionnaires were mailed to both groups on September 4, 1981. Follow-up letters and telephone calls were made for four months. There was a 100 percent return among the institutions and 98 percent among the states.

The respondents were asked to provide information regarding numbers of graduates qualified and the number of teaching positions available. Responses have been tabulated for each state and each institution preparing teachers. A copy of each of the questionnaires used in the study is included in the Appendix.

SUMMARY

A summary of the vocational agriculture teacher demand and supply situation is included at this point for the convenience of those readers who do not wish to read the entire study. The following represents a brief review of selected findings and conclusions.

The secondary vocational agriculture supply/demand situation has stabilized in recent years. A total of 1,468 persons were qualified for teaching vocational agriculture in 1981 as compared to 1,584 last year. The number qualified is the lowest in the last twelve years of this study. The percentage of individuals placed in teaching positions dropped to 52.2 percent in 1981. The seventeen year average is 57.2 percent.

A shortage of vocational agriculture teachers continues to exist. However, the shortage occurs in certain areas of the country in an irregular pattern. There were only 767 graduates entering teaching for the 1,600 replacements employed up to September 1, 1981. There were 98 teachers still needed on that date. A turnover of 12.9 percent, one of the highest in seven years, also contributed to the teacher shortage.

A comparison of the number of teachers of vocational agriculture in the nation over the past decade shows that the number has increased from a low of 10,221 in 1967 to a record high of 12,844 in 1978. There

were 12,450 teachers identified in 1981. This number shows a two-year decline of about 572 teaching positions. Conversely, the number of vocational agriculture teachers in post secondary institutions increased by 38 percent from 1980. A total of 1,897 post secondary teachers were identified in 31 states in 1981.

Several trends continue to appear in types of secondary vocational agriculture teaching positions. About 85 percent of all positions occurred in general or comprehensive high schools, while approximately 13 percent were employed in area vocational high schools. About two-thirds, or 66.9 percent, of the positions involved teaching only high school students. The number of teachers in single-teacher departments represented about 54 percent of the total, a figure which has stablized in recent years.

About 675 fewer teachers than in 1979 were teaching in production agriculture programs while 57 more teachers were in ornamental horticulture. Slightly more than 80 percent of the teachers continue to teach full time or part time production agriculture.

With regard to post secondary vocational agriculture teachers, almost 66 percent taught full time and more than 72 percent taught in community colleges. Most of the post secondary teachers, or about 91 percent, taught in multiple teacher departments. The number of teachers in the various program areas was balanced among production agriculture, ornamental horticulture, other specialty areas such as agricultural mechanics, or a combination of agricultural production and other specialties.

Most secondary teaching positions were filled by fully qualified persons holding a bachelor's degree. The number of positions filled by teachers with temporary or emergency certificates decreased by about 25 percent to 327 in 1981.

The modal secondary vocational agriculture teacher in the United States teaches only high school classes, in a comprehensive high school, in a single-teacher department, teaching production agriculture as well as one or more specialized agriculture classes. The modal post secondary vocational agriculture teacher teaches full time, in a community college, in a multiple-teacher department full time or part-time production agriculture classes.

RECOMMENDATIONS

The Professional Personnel Recruitment Committee has recommended that approximately 2,000 persons per year be qualified for teaching vocational agriculture in the nation. It would appear that this goal is realistic, as evidence is submitted showing the need for more qualified vocational agriculture teachers. In addition, enrollments in colleges of agriculture continue to increase. In view of this goal, the following recommendations are made:

1. Vocational agriculture teachers should recruit their best students each year for teaching vocational agriculture. Each teacher should have as his/her goal that at least one of his/her students graduate in agricultural education every two to three years.

2. Teacher turnover should be reduced and maintained at a low percentage level. Local administrators, state supervisors in agricultural education and professional organizations should provide a variety of incentives to encourage all effective teachers of quality programs to remain in the profession.

3. State supervisors and teacher educators in surplus states should encourage current agricultural education graduates to cross state lines

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to areas where shortages exist. Continued efforts need to be made to make teacher salaries competitive with other fields in which they might enter.

4. State vocational agriculture teacher associations should exercise leadership in forming and/or maintaining an active recruiting campaign. Emphasis should be placed upon the variety of job opportunities, especially specialized subject areas, locations of jobs, and the advantages of teaching as a profession (for example, the importance of agriculture and working with youth). Recruitment efforts should focus on state, district and local FFA officers and award winners. Colleges of agriculture, departments of agricultural education and agricultural industry could offer additional scholarships to potential majors in agricultural education.

5. Agricultural education leaders at the state level should make strong efforts to reduce the number of uncertified teachers in the profession. Continued steps need to be taken to broaden certification standards to include such areas as horticulture, agricultural business and agricultural mechanics. Names and addresses of available and certified teachers need to be placed in the hands of employing superintendents and boards of education.

6. Previous recommendations for further research about vocational agriculture teacher supply and demand have been followed. Studies have been completed and published as follows: "A Synthesis of Current Research About Vocational Agriculture Teacher Supply and Demand" and "Why Do Vocational Agriculture Teachers Leave (or Stay in) the Profession."

7. This longitudinal study of the supply and demand for teachers of vocational agriculture should be continued in 1982. Proposals for funds have been submitted to the Agricultural Education Division of the American Vocational Association for this study and recruitment activities.

MAJOR FINDINGS

The demand for secondary teachers of vocational agriculture is shown in Table I. A turnover of 12.9 percent required 1,600 teacher replacements for the 12,450 positions in 1981. This table shows that there is still a teacher shortage in that 98 teachers were needed but not available September 1, and that 39 departments could not operate during the 1981-82 school year because of a lack of teachers.

TABLE I

NUMBER OF SECONDARY TEACHING POSITIONS IN VOCATIONAL AGRICULTURE IN THE UNITED STATES IN 1981

Item	Number
1. Total positions as of 6/30/81	12,450a
2. New graduates entering teaching during the 1980-81 school year	767b
3. New positions added during 1980-81 school year (net total)	-112c
4. Number of newly qualified teachers still available 9/1/81	65d
5. Teachers needed but unavailable 9/1/81	98e
6. Teachers with temporary or emergency certificates	327f
7. Departments which will not operate in 1981-82 because of the teacher shortage	39g

[a]A decrease of 150 from last year; a 422 decrease from 1979.
[b]A decrease of 57 from the 1980 figure; a decrease of 142 from 1979.
[c]A decrease of 122 from last year; a decrease of 140 from 1979.
[d]An increase of 7 from the 1980 figure; up 24 from 1979.
[e]A decrease of 19 from 1980; down 46 from 1979.
[f]A decrease of 127 from last year; a decrease of 192 from 1979.
[g]A decrease of 16 from last year; down 26 from 1979.

Agricultural Education Graduates

It is evident from Table II that a total of 1,468 teachers were qualified by institutions last year and of these, 767, or 52.2 percent, accepted secondary teaching positions in vocational agriculture. The table also shows the most recent ten-year trends of the number of teachers qualified and the percent entering various occupational areas.

TABLE II

PERCENTAGES OF AGRICULTURAL EDUCATION GRADUATES ENTERING VARIOUS OCCUPATIONS DURING THE LAST TEN YEARS

Occupation	'1972	'1973	'1974	'1975	'1976	'1977	'1978	1979	'1980	'1981
Total Number Qualified	1759	1713	1623	1660	1697	1749	1791	1656	1584	1468
Total Number Placed in Secondary Vo-Ag	964	966	943	999	1043	1063	1015	909	824	767
Teaching Vo-Ag	54.8	56.3	58.1	60.2	61.5	60.8	56.7	54.9	52.0	52.2
Ag Business	6.3	6.8	7.8	7.5	6.3	7.4	9.3	14.9	13.8	14.5
Other Work	11.0	13.7	10.8	9.9	11.0	13.7	13.8	7.5	8.8	8.9
Farming	7.7	9.3	9.2	8.2	8.2	8.2	7.3	7.9	7.6	8.4
Graduate Work	7.9	7.6	8.9	9.8	8.8	6.3	9.1	9.1	10.3	8.0
Unemployed	(no data 1971-78)							2.5	3.6	4.4
Other Teaching	6.6	4.1	4.1	3.3	2.5	1.8	2.3	2.1	2.3	2.0
Armed Forces	5.0	2.2	1.1	1.1	1.7	1.8	1.0	1.1	1.6	1.6

Enrollments in Agricultural Colleges

There should be a close relationship between the number of agricultural teachers qualified and the number of persons enrolled in agricultural colleges. Table III shows a more rapid increase in agricultural college enrollments over this seventeen-year period than the number qualified to teach. More specifically, as the number of persons qualified to teach has decreased somewhat in the past ten years, the agricultural college enrollements have more than tripled.

TABLE III

ENROLLMENT IN COLLEGES OF AGRICULTURE COMPARED WITH NUMBERS QUALIFIED IN AGRICULTURAL EDUCATION 1959-81

Academic Year	Enrollment in Agriculture	Percent Based on 1959-60	Number Qualified in Agricultural Education	Percent Based on 1959-60
1959-60	33,968	100%	1,324	100%
1964-65	39,623	116.6	1,110	83.8
1968-69	52,623	115.8	1,566	118.3
1969-70	57,517	169.3	1,700	128.4
1970-71	62,863	185.0	1,743	131.6
1971-72	66,057	194.4	1,759	132.9
1972-73	66,752	196.5	1,713	129.4
1973-74	77,516	228.2	1,623	122.6
1974-75	88,992	262.0	1,660	125.4
1975-76	97,941	288.3	1,697	128.2
1976-77	103,382	304.4	1,749	132.1
1977-78	101,440	298.6	1,791	135.3
1978-79	103,793	305.6	1,656	125.1
1979-80	105,755	311.3	1,584	119.6
1980-81	104,260	306.9	1,468	110.9

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A Seventeen-Year Comparison of Teacher Supply

A seventeen-year comparison of the number of positions in teaching vocational agriculture in Table IV shows a general upward trend since 1971. The highest number of teaching positions occurred in 1978 when there were 12,844. Since that year, there has been a steady decline of positions.

During the last ten years, there has been an average need per year for more than 189 teachers that were not available. Also during the last ten years, 1980 showed the lowest percent of qualified persons entering vo-ag teaching.

TABLE IV

A SEVENTEEN-YEAR COMPARISON OF SELECTED INFORMATION ON THE SUPPLY OF TEACHERS OF VOCATIONAL AGRICULTURE

Year	Total No. of Positions	Teachers Needed But Not Available September 1	Total Qualified for Teaching	Percent Qualified Entering Vo-Ag Teaching
1965	10,378	120	1,038	64.6
1966	10,325	162	1,151	61.4
1967	10,221	232	1,233	60.2
1968	10,606	141	1,314	61.6
1969	10,560	121	1,566	56.9
1970	10,520	171	1,700	51.0
1971	10,438	120	1,743	49.6
1972	10,716	134	1,759	54.8
1973	11,141*	276	1,713	55.3
1974	11,578*	292	1,623	58.1
1975	12,107*	211	1,660	60.2
1976	12,486*	211	1,697	61.5
1977	12,694*	221	1,749	60.8
1978	12,844*	189	1,791	56.7
1979	12,772*	144	1,656	54.9
1980	12,510*	117	1,584	52.0
1981	12,450*	98	1,468	52.2

*The figures for 1973 to 1981 do not include teachers of agricultural technicians in technical institutes, community colleges, and similar institutions.

Changes in Curriculum
and Clientele, Secondary and Post Secondary

Changes in secondary vocational agriculture teaching positions are shown in Table V. This table shows that an increasing number, 421 or 3.4 percent of the teachers taught classes in junior high school, while about two-thirds taught high school classes only; 27.8 percent of the teachers taught high school classes as well as classes for adult and young farmers. The number teaching full-time adult and young farmer classes has dropped about 58 percent in the last five years.

As to the kind of schools, 85.1 percent of the vocational agriculture positions were located in comprehensive or general high schools, while 13 percent occurred in area vocational high schools. The number of teachers located in single-teacher departments has fluctuated between 48 and 52 percent in recent years. The percent increased to 53.6 in 1981. Hence, the number of persons located in multiple-teacher departments decreased to 46.4 percent.

Curricular offerings in vocational agriculture are showing trends toward specialization. Slightly less than two-thirds of the teachers are teaching, at least part time, in specialized nonproduction programs. About 19 percent of the teachers are full time in some form of specialized off-farm program. The number of teachers in production agriculture programs has stabilized at 35.3 percent of the total.

TABLE V

TYPES OF SECONDARY TEACHING POSITIONS IN VOCATIONAL AGRICULTURE IN 1980 AND IN 1981

Type of Position	Number 1980	Number 1981	Percent of Total 1981
By Kind of Students			
Teachers of junior high school classes only	566	421	3.4
Teachers of high school classes only	6,715	8,291	66.9
Teachers of both high school and out-of-school classes (adult and/or young farmer classes)	5,075	3,454	27.8
Teachers of adult and young farmer classes only	359	234	1.9
By Kind of School			
Teachers in general or comprehensive high schools	10,771	10,012	85.1
Teachers in area vocational high schools	1,468	1,524	13.0
Teachers in vocational high schools	171	223	1.9
By Size of Staff			
Teachers in single-teacher departments	6,421	6,395	53.6
Teachers in multiple-teacher departments	6,154	5,540	46.4
By Kind of Program			
Teachers in full-time production agriculture programs	4,017	4,043	35.3
Teachers in full-time ornamental horticulture programs	1,151	1,208	10.5
Teachers in part-time production agriculture programs and had one or more classes in specialized programs such as Agricultural Supplies, Agricultural Mechanics	5,715	5,232	45.7
Teachers in full-time specialized programs such as Agricultural Supplies, Agricultural Mechanics, Agricultural Products	1,096	973	8.5

A breakdown of the types of post-secondary teaching positions in vocational agriculture occurs in Table VI. There were 668 more post-secondary teachers identified in 1981 than the previous year. Thirty-one states reported post-secondary teachers.

Almost two-thirds, or 65.5 percent, of the post-secondary teachers taught in full-time positions. Approximately 32 percent taught part time.

When considering the kind of school, most post-secondary teachers, or 72.7 percent, taught in community colleges. About 16 percent taught in technical institutes, while nearly 11 percent taught in area schools.

As to size of staff, 91.5 percent of teachers were in multiple-teacher departments. Thus, less than 10 percent of the teachers were in single-teacher departments. Almost 30 percent of the teachers taught full-time production agriculture. Another 20 percent taught full-time ornamental horticulture. Almost 24 percent taught in other specialized programs such as agricultural mechanics. Thus, the remaining post-secondary teachers, 27.1 percent, taught part-time production agriculture and in at least one other specialized program.

Graduates and Secondary Teaching Positions by States and Regions

There was a close relationship between the regions with the largest number of teaching positions and those producing the largest number of qualified graduates as shown in Table VII. All regions placed 46 percent or more of their respective qualified graduates. The Pacific Region had the highest placement rate with 57.9 percent. Although the Southern Region and the Central Region qualified and placed the largest numbers of teachers, the rate of placement by them was lower than the other regions.

TABLE VI

TYPES OF POST SECONDARY TEACHING POSITIONS
IN VOCATIONAL AGRICULTURE IN 1981*

Type of Position	Number	Percent
By Employment Time		
Teachers who teach full time	1,228	65.5
Teachers who teach part time	595	31.8
Teachers who teach part time as well as adult and/or young farmer classes	50	2.7
By Kind of School		
Teachers in area schools	193	10.8
Teachers in community colleges	1,295	72.7
Teachers in technical institutes	294	16.5
By Size of Staff		
Teachers in single-teacher departments	152	8.5
Teachers in multiple-teacher departments	1,643	91.5
By Kind of Program		
Teachers in full-time production agriculture	366	29.2
Teachers in full-time ornamental horticulture	251	20.0
Teachers in part-time production agriculture and part time in specialized programs such as agricultural supplies or other	340	27.1
Teachers in specialized programs such as agricultural mechanics or other	298	23.7

*There were 31 states reporting 1,897 post-secondary vocational agriculture teachers.

TABLE VII

PLACEMENT OF AGRICULTURAL EDUCATION GRADUATES
BY REGIONS IN 1981

Region	Teaching Positions	Number Qualified Graduates	Number Placed in Teaching Vo-Ag	Percent Placed in Teaching Vo-Ag
Southern	5,731	667	339	50.8
Central	3,709	466	251	53.9
Pacific	1,610	190	110	57.9
North Atlantic	1,400	145	68	46.9

A comparison of the number of teaching positions in each of the states and regions is shown in Table VIII. Ten states had over 400 teachers of agriculture in secondary schools. They include Texas, 1,618; Ohio, 733; California, 633; Minnesota, 508; Florida, 481; Illinois, 463; Oklahoma, 452; Alabama, 427; North Carolina, 415; and Virginia, 401.

The number of teacher replacements was highest in the Southern Region which required 777 teachers, followed by the Central Region with 482, the Pacific Region with 211, and the North Atlantic Region with 130. The Southern Region had the greatest need for teachers on September 1 with 66; the North Atlantic Region, 16; the Central Region, 12; and the Pacific Region needed 4.

TABLE VIII

SECONDARY TEACHING POSITIONS IN VOCATIONAL AGRICULTURE
BY STATES AND REGIONS, SEPTEMBER 1, 1981

North Atlantic Region

State	Total Positions 8/1/81	Number Replacements Employed to 8/1/81	Net Gain in Positions Since 8/1/80	Total Teachers Needed	Teachers Still Needed 8/1/81
New York	393	46	-1	45	10
Pennsylvania	367	30	-4	26	1
West Virginia	115	7	-3	4	1
Maryland	103	12	+2	14	1
Massachusetts	98	4	+2	6	3
New Jersey	72	9	+1	10	0
Connecticut	62	3	-1	2	0
Maine	52	4	-2	2	0
Delaware	45	1	-1	0	0
Vermont	43	5	-3	2	0
New Hampshire	36	9	+3	12	0
Rhode Island	14	0	0	0	0
Total For Region	1,400	130	-7	123	16

TABLE VIII (continued)

SECONDARY TEACHING POSITIONS IN VOCATIONAL AGRICULTURE
BY STATES AND REGIONS, SEPTEMBER 1, 1981

Central Region

State	Total Positions 8/1/81	Number Replacements Employed to 8/1/81	Net Gain in Positions Since 8/1/80	Total Teachers Needed	Teachers Still Needed 8/1/81
Ohio	733	77	+ 1	78	5
Minnesota	308	63	-22	41	2
Illinois	463	64	0	64	0
Missouri	375	28	0	28	0
Wisconsin	346	49	- 1	48	0
Iowa	285	58	-11	47	0
Indiana	278	32	-14	18	4
Michigan	202	15	- 4	11	1
Kansas	188	27	+ 1	28	0
Nebraska	152	30	- 3	27	0
North Dakota	98	30	- 1	29	0
South Dakota	81	9	+ 1	10	0
Total For Region	3,709	482	-53	429	12

Pacific Region

California	633	66	-18	48	0
Washington	253	35	- 1	34	0
Oregon	139	15	- 6	9	0
Colorado	96	24	- 1	23	0
Idaho	83	11	- 1	10	0
Montana	81	20	- 2	18	1
Arizona	76	11	- 1	10	0
New Mexico	74	9	+ 2	11	0
Utah	68	5	0	5	1
Wyoming	52	7	0	7	0
Hawaii	26	3	+ 3	6	2
Nevada	22	5	- 1	4	0
Alaska (1980)	7	0	0	0	0
Total For Region	1,610	211	-26	185	4

TABLE VIII (continued)

SECONDARY TEACHING POSITIONS IN VOCATIONAL AGRICULTURE
BY STATES AND REGIONS, SEPTEMBER 1, 1981

Southern Region

State	Total Positions 8/1/81	Number Replacements Employed to 8/1/81	Net Gain in Positions Since 8/1/80	Total Teachers Needed	Teachers Still Needed 8/1/81
Texas	1,618	322	+ 16	338	33
Florida	481	51	+ 7	58	11
Oklahoma	452	80	0	80	0
Alabama	427	28	- 4	24	0
North Carolina	415	23	- 19	4	3
Virginia	401	41	- 9	32	0
Georgia	366	64	+ 1	65	3
Louisiana	293	22	- 8	14	2
Kentucky	289	24	- 2	22	4
Arkansas	279	39	+ 1	40	6
Mississippi	269	21	- 2	19	1
Tennessee	259	38	- 5	33	0
South Carolina	182	24	- 2	22	3
Total For Region	5,731	777	- 26	751	66
Total For The United States	12,450	1,600	-112	1,488	98

Sources of Teacher Replacement

In order to assist with recruitment, an attempt was made to determine the sources from which teacher replacements were hired. There were few major differences among the regions as to the sources of teacher replacement (See Table IX). About 30 percent of the replacements were hired from other schools. The largest source of teacher replacement, or 41 percent of the total, was the agricultural education, bachelor of science graduate. Almost 50 percent of the replacements were recent agricultural or agricultural education graduates. Approximately, 15 percent reentered from an agricultural field of work.

TABLE IX

SOURCES OF TEACHER REPLACEMENT
BY REGION IN 1981

Sources of Teacher Replacement	Region					
	Central	North Atlantic	Pacific	Southern	Total	Percent
Transfers Between Schools	112	19	61	271	463	29.6
Ag. Ed. B.S. Graduates	255	42	84	261	642	41.0
Ag. Ed. M.S. Graduates	30	7	3	24	64	4.1
Other Agriculture Graduates	4	7	23	29	63	4.0
Other Education Graduates	0	2	0	9	11	0.7
Previous Ag./Ag.-Ed. Graduates	15	12	11	60	98	6.3
Former Vo.-Ed. Teachers	24	10	15	47	96	6.1
Re-entry, Ag. Business	13	1	2	12	28	1.8
Re-entry, Farming	8	0	3	9	20	1.3
Re-entry, Other	3	0	1	14	18	1.1
Non-degree	12	6	1	4	23	1.5
Other	6	22	7	4	39	2.5

Number of Teachers Prepared and Placed
by State and Region

Table X shows that 1,460 persons were prepared for teaching vocational agriculture in the United States in 86 different institutions. Of those individuals, 767 became teachers of vocational agriculture, 213 have chosen agricultural business careers, 183 entered other fields of work, 117 began graduate work, 123 began farming, while 65 were unemployed. The largest number of teachers, 667, were prepared in the Southern Region, followed by 466 in the Central Region. The Pacific Region qualified 190, and 145 were prepared in the North Atlantic Region.

There was a wide range of percent placement among the states, i.e., 0.0 to 91.7. Florida had the highest percent placement. The percent placement showed considerable variation from state to state and when comparing data with that of 1980. Also, there is variation of placement rates among the institutions in any one state. The five states with the highest placement rates in vocational agriculture were, in order: Florida, Arizona, Iowa, Oklahoma, and Colorado. The lowest placement rates were in the following states: Idaho, Massachusetts, Maine, Nevada, and Vermont.

In 32 states, one university has been designated for the preparation of teachers of vocational agriculture. States with more than one institution preparing teachers of vocational agriculture included Texas with 9; Tennessee had 5; and California, Illinois, Kentucky, and Louisiana, with 4 each. Arkansas, Oklahoma and Wisconsin have 3 each and there are 2 each in Alabama, Delaware, Georgia, Maryland, Mississippi, North Carolina and Virginia.

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TABLE X

GRADUATES IN AGRICULTURAL EDUCATION AND PLACEMENT
BY STATES AND REGIONS DURING THE 1980-81 SCHOOL YEAR

North Atlantic Region

State	Institutions Reporting	Number of Qualified Graduates					
		Teaching Vo-Ag	Agr. Business	Farming	Graduate Work	Other	Total
Connecticut	Univ. of Connecticut	3	1	1	0	1	6
Delaware	Delaware State College	1	0	0	0	0	1
	Univ. of Delaware	3	0	0	3	5	11
Maine	Univ. of Maine	0	1	0	0	0	1
Maryland	Univ. of Maryland, College Park	3	3	1	0	1	8
	Univ. of Maryland, Eastern Shore	0	0	0	0	0	0
Massachusetts	Univ. of Massachusetts	2	4	1	1	2	10
New Hampshire	Univ. of New Hampshire	4	0	0	0	8	12
New Jersey	Rutgers University	3	0	0	1	1	5
New York	Cornell University	14	1	0	4	2	21
Pennsylvania	Pennsylvania State Univ.	26	8	6	4	4	48
Rhode Island	Univ. of Rhode Island	2	3	0	0	2	7
Vermont	Univ. of Vermont	0	1	0	0	1	2
West Virginia	West Virginia University	7	2	1	0	3	13
Total For Region		68	24	10	13	30	145

TABLE X (continued)

GRADUATES IN AGRICULTURAL EDUCATION AND PLACEMENT
BY STATES AND REGIONS DURING THE 1980-81 SCHOOL YEAR

Central Region

State	Institutions Reporting	Number of Qualified Graduates					
		Teaching Vo-Ag	Agr. Business	Farming	Graduate Work	Other	Total
Illinois	Illinois State Univ.	7	0	0	1	0	8
	Southern Illinois Univ.	12	5	1	7	4	29
	University of Illinois	10	3	0	0	1	14
	Western Illinois Univ.	8	1	1	0	2	12
Indiana	Purdue University	15	3	2	3	20	43
Iowa	Iowa State University	30	3	3	0	4	40
Kansas	Kansas State University	8	1	6	5	7	27
Michigan	Michigan State University	9	8	1	3	2	23
Minnesota	University of Minnesota	22	5	4	2	6	39
Missouri	Northwest Missouri State Maryville, Missouri	5	1	4	2	1	13
	University of Missouri	22	4	5	3	2	36
Nebraska	University of Nebraska	18	6	4	0	4	32
North Dakota	North Dakota State Univ.	12	4	2	1	1	20
Ohio	Ohio State University	23	5	5	0	10	43
South Dakota	South Dakota State Univ.	13	5	4	0	4	26
Wisconsin	Univ. of Wisconsin, Madison	15	1	0	2	1	19
	Univ. of Wisconsin, Platteville	5	1	6	1	1	14
	Univ. of Wisconsin, River Falls	17	6	3	0	2	28
Total For Region		251	62	51	30	72	466

TABLE X (continued)

GRADUATES IN AGRICULTURAL EDUCATION AND PLACEMENT
BY STATE AND REGIONS DURING THE 1980-81 SCHOOL YEAR

Pacific Region

State	Institutions Reporting	Number of Qualified Graduates					
		Teaching Vo-Ag	Agr. Business	Farming	Graduate Work	Other	Total
Arizona	Univ. of Arizona	10	1	1	0	1	13
California	California State University	6	0	0	0	4	10
	California Polytechnic State University, Pamona	6	2	1	0	2	11
	California Polytechnic State University, San Luis Obispo	15	3	0	0	6	24
	University of California	5	0	0	0	1	6
Colorado	Colorado State University	19	0	4	2	2	27
Idaho	University of Idaho	3	4	3	1	2	13
Montana	Montana State University	5	0	4	0	5	14
Nevada	University of Nevada	0	0	2	0	3	5
New Mexico	New Mexico State Univ.	6	0	0	3	1	10
Oregon	Oregon State University	10	0	2	1	2	15
Utah	Utah State University	2	0	1	1	3	7
Washington	Washington State Univ.	14	5	1	0	2	22
Wyoming	Univ. of Wyoming	9	1	0	1	2	13
Total For Region		110	16	19	9	36	190

TABLE X (continued)

GRADUATES IN AGRICULTURAL EDUCATION AND PLACEMENT
BY STATE AND REGIONS DURING THE 1980-81 SCHOOL YEAR

Southern Region

State	Institutions Reporting	Number of Qualified Graduates					
		Teaching Vo-Ag	Agr. Business	Farming	Graduate Work	Other	Total
Alabama	Alabama A&M Univ.	2	3	0	1	4	10
	Auburn University	15	10	1	1	2	29
Arkansas	Arkansas State Univ.	8	3	2	2	1	16
	Univ. of Arkansas, Fayetteville	10	3	0	0	1	14
	Univ. of Arkansas, Pine Bluff	3	0	2	0	10	15
Florida	Univ. of Florida	22	0	1	1	0	24
Georgia	Fort Valley State College	0	1	0	1	2	4
	Univ. of Georgia	16	2	1	2	3	24
Kentucky	Morehead State Univ.	3	0	0	1	1	5
	Murray State Univ.	8	3	0	2	1	14
	Univ. of Kentucky	11	3	4	0	5	23
	Western Kentucky Univ.	6	3	3	0	0	12
Louisiana	Louisiana State Univ.	6	3	0	0	2	11
	Louisiana Tech. Univ.	2	1	0	0	2	5
	Southern Univ.	1	0	0	1	3	5
	Univ. of S.W. Louisiana	2	2	0	0	0	4
Mississippi	Alcorn State Univ.	0	4	1	0	10	15
	Mississippi State Univ.	10	2	0	2	2	16
North Carolina	A&T State Uviversity	4	0	0	3	5	12
	North Carolina State Univ.	14	7	2	7	0	30
Oklahoma	*Cameron Univ., Lawton	0	0	0	0	0	0
	Oklahoma State Univ.	29	3	2	3	2	39
	*Panhandle State Univ., Goodwill	0	0	0	0	0	0
South Carolina	Clemson University	12	4	1	1	2	20

MORE

* First Year Program

TABLE X (continued)

GRADUATES IN AGRICULTURAL EDUCATION AND PLACEMENT
BY STATE AND REGIONS DURING THE 1980-81 SCHOOL YEAR

Southern Region

State	Institutions Reporting	Number of Qualified Graduates					
		Teaching Vo-Ag	Agr. Business	Farming	Graduate Work	Other	Total
Tennessee	Middle Tenn. State Univ.	4	2	2	0	1	9
	Tennessee State Univ.	1	0	0	0	1	2
	Tennessee Tech. Univ.	3	0	0	0	0	3
	Univ. of Tenn., Knoxville	2	0	0	0	5	7
	Univ. of Tenn., Martin	3	2	1	0	1	7
Texas	East Texas State Univ.	26	10	2	8	2	48
	Prairie View A&M College	0	0	0	1	4	5
	Sam Houston State Univ.	22	9	2	5	1	39
	Southwest Texas State Univ.	5	6	2	1	0	14
	Stephen F. Austin State Univ.	6	8	0	0	1	15
	Tarleton State University	25	6	5	8	4	48
	Texas A&I University	3	0	0	0	5	8
	Texas A&M University	28	5	3	7	9	52
	Texas Tech. Univ.	11	4	6	6	2	29
Virginia	Virginia Polytechnic Inst. & State University	14	2	2	0	10	28
	Virginia State University	2	0	0	1	3	6
Total For Region		339	111	43	65	109	667
Total For United States		767	213	123	117	248	1,468

Suggestions to States with Teacher Shortages

Table XI is included to aid those who wish to locate additional teachers from other regions. A comparison of the number of teachers qualified and the numbers employed but not teaching, shows that all of the regions had an appreciable number of qualified persons accepting other positions. It is also emphasized that only 5.9 percent of the qualified teachers (0.2 percent above last year) left their home states to find employment in vocational agriculture elsewhere. These data may be an indication of high and low teacher supply regions.

TABLE XI

PLACEMENT OF GRADUATES IN NONVO-AG TEACHING POSITIONS AND OUTSIDE THE STATE BY REGION IN 1981

Region	Teachers Qualified	Employed But Not Teaching Vo-Ag	Employed Outside the State
Southern Region	667	311	36
Central Region	466	187	25
Pacific Region	190	66	12
North Atlantic	145	72	13
TOTAL	1,468	636	86

APPENDICES

APPENDIX A

DUE OCTOBER 1, 1981

RETURN TO: Dr. David G. Craig
Department of Vocational-Technical Education (Agriculture)
225 Morgan Hall
University of Tennessee
Knoxville, TN 37916

PLEASE - Return by October 1, 1981

SURVEY OF TEACHER DEMAND IN VOCATIONAL AGRICULTURE IN 1981

Name _____ Position _____ State____

1. Number of secondary teachers of vocational agriculture employed in your state during 1980-81 school year. ____ (Do not include post-secondary teachers.)

2. Number of replacements required for the above teachers during the past year. ___

3. Of the replacements hired, how many were:

   a. Transfers from one school to another ____

   b. Agr. Educ. B.S. 1981 graduates ____

   c. Agr. Educ. M.S. 1981 graduates ____

   d. Other agriculture 1981 graduates ____

   e. Other education 1981 graduates ____

   f. Previous Agriculture or Agr. Educ. graduates ____

   g. Former vo-ag teachers ____

   h. Re-entry, Ag business ____

   i. Re-entry, farming ____

   j. Re-entry, other ____

   k. Non-degree ____

   l. Other ____

   Total replacements should match No. 2 above ____

4. Number of new and additional positions in teaching vocational agriculture which became available during the past year (7/1/80 to 6/30/81). ____

Number of positions discontinued. ____

Net gain or loss in number of positions during the past year. ____

5. Number of vocational agriculture teachers still needed (9/1/81) but not available in your state. ____

6. Number of vocational agriculture teachers last year who held emergency or temporary certificates. ____

7. Number of departments which probably will not operate this year because of a shortage of teachers. ____

Of the total number of vocational agriculture teachers--

Secondary		Post-Secondary	
How many teachers:		How many teachers:	
8.1	Taught junior high school or middle school classes only? ____	9.1	Taught full time? ____
8.2	Taught high school classes only? ____	9.2	Taught part time only? ____
8.3	Taught both high school and adult and/or young farmer classes? ____	9.3	Taught part time as well as adult and/or young farmer classes? ____
8.4	Taught adult and/or young farmer classes only? ____		Total teachers in state = ____
	Total teachers in state = ____	How many teachers:	
How many teachers:		9.4	Taught in area schools? ____
8.5	Taught in comprehensive high schools? ____	9.5	Taught in community colleges? ____
8.6	Taught in vocational schools? ____	9.6	Taught in technical institutes? ____
8.7	Taught in area vocational high schools? ____		Total teachers in state = ____
	Total teachers in state = ____	How many teachers:	
How many teachers:		9.7	Taught in single-teacher departments? ____
8.8	Taught in single-teacher departments? ____	9.8	Taught in multiple-teacher departments? ____
8.9	Taught in multiple-teacher departments? ____		Total teachers in state = ____
	Total teachers in state = ____		

Secondary		Post-Secondary	
How many teachers:		How many teachers:	
8.10	Taught full time in production agriculture programs? ____	9.9	Taught full time in production agriculture programs? ____
8.11	Taught full time in ornamental horticulture programs? ____	9.10	Taught full time in ornamental horticulture programs? ____
8.12	Taught part time in production agriculture and part time in specialized programs such as agricultural supplies or other? ____	9.11	Taught part time in production agriculture and part time in specialized programs such as agricultural supplies or other? ____
8.13	Taught full time in specialized programs such as agricultural mechanics? ____	9.12	Taught full time in specialized programs such as agricultural mechanics? ____
	Total teachers in state = ____		Total teachers in state = ____

APPENDIX B

DUE OCTOBER 1, 1981

RETURN TO: Dr. David G. Craig
Department of Vocational-Technical Education (Agriculture)
225 Morgan Hall
Knoxville, TN 37916

PLEASE - Return by October 1, 1981

SURVEY OF TEACHER SUPPLY IN VOCATIONAL AGRICULTURE IN 1981

1. Total full-time, four-year degree undergraduate enrollment in your institution:

   1.1 In Agriculture (not including Home Economics, Business, Hotel Administration.) ____

   1.2 In Agricultural Education. ____

2. Number qualified for teaching vocational agriculture from your college or university 7/1/80 to 6/30/81. ____

3. Given those qualified above, indicate their employment status as of 9/1/81: (Please check your addition.)

   3.1 Teaching Vo-Ag ____
   3.2 Teaching other subjects ____
   3.3 Ag Business ____
   3.4 Farming ____
   3.5 Graduate Work ____
   3.6 Armed Forces ____
   3.7 Other (including foreign students) ____
   3.8 Unemployed or still available ____

4. Of those qualified during 7/1/80 to 6/30/81, how many were employed in Vo-Ag outside your state? ____

   4.1 Of the graduates who took Vo-Ag jobs in other states, please list the number going to each state.

STATE	NUMBER	STATE	NUMBER

Signed _____ Institution _____